

PATIENT PRESENTING CLINICAL SIGNS

Oscar Conway Chief Concern / Provisional Diagnosis: Clinically doing well but elevated ALP and UPC. Sibling had history of liver disease they passed away from. Relevant Medical History and Physical Exam findings: Oscar is doing well but further work up of laboratory changes. Recent Diagnostics: Relevant Laboratory Results / Abnormalities: -ALP 867 (H) compared to 486 on 10/26/21 -Cholesterol 402 (H) compared to 362 on 10/26/21 Urinalysis -UPC 2.4 (H) compared to 1.6 on 10/26/2021 Current medications (include full name, dosage and frequency): No current medications or supplements

SPECIES

Canine

BREED

Miniature Schnauzer

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

SEX

Neutered Male

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

AGE

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The prostate is normal in size (0.79 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

WEIGHT

25 Pounds

The left kidney has a normal shape and size (4.81 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

Kathleen Sennello DVM,
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(Small Animal Internal
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The right kidney has a normal shape and size (4.0 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

Adrenal Glands

The left adrenal gland is normal in size measuring 0.59 cm at the caudal pole It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

HOSPITAL NAME

MountainView AH

The right adrenal gland is normal in size measuring 0.5 cm at the caudal pole It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

REFERRING VET

Dr. Kalivoda

Spleen

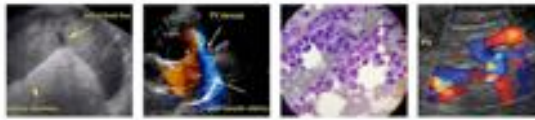
The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is an ill-defined, hypoechoic nodule that measured 0.44 cm and was visualized within the splenic parenchyma.

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95992

DATE

2/10/22



PATIENT *Liver*

Oscar Conway The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed. The gallbladder lumen is moderately distended. The wall of the gallbladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

SPECIES

Canine

BREED

Miniature Schnauzer

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

SEX

Neutered Male

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. The duodenum measured 0.4 cm and the jejunum measured 0.26 cm. Bowel loops follow a typical curvilinear path with distinct wall layering. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed

AGE

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The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

WEIGHT

25 Pounds

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Pancreas

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The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

IMAGING PERFORMED BY

Free Abdomen

Loetitia Saint-Jacques, RVT

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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Heart

REFERRING VET

A brief view of the heart was submitted. No pericardial effusion was seen.

Dr. Kalivoda

ULTRASONOGRAPHIC FINDINGS

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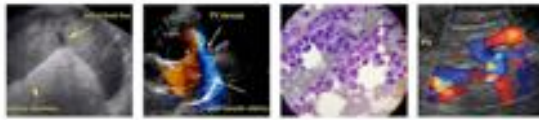
PRIMARY FINDINGS:

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- Large, heterogenous liver. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

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PATIENT

Oscar Conway

- Hypoechoic nodule within the splenic parenchyma. There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

SPECIES

Canine

- Mildly thickened small intestine. The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).

BREED

Miniature Schnauzer

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions were visualized associated with the liver and the gallbladder changes were relatively mild. These findings are most consistent with a primary hepatopathy.

SEX

Neutered Male

- Induction phenomena are the most common cause for an elevation in ALP. These are systemic illnesses that 'turn on' the liver enzyme. Causes of this include Cushing's disease, dental disease, arthritis, and numerous others. In many cases the exact cause is unclear but as long as ultrasound and bile acids tests are normal most patients do not have progressive changes in their liver. While liver biopsy is not routinely performed, vacuolar hepatopathy, is noted on most biopsies. This is often non-progressive but in rare cases can be more severe and lead to liver failure.

AGE

-

WEIGHT

25 Pounds

- If signs of Cushing's disease are present recommend endocrine function testing to evaluate for Cushing's disease.
- Consider fine needle aspirate to rule out round cell neoplasia -if this is a concern.
- If a cause for the ALP elevation is not identified: I recommend recheck general blood work every 6 months, ultrasound once per year, and bile acids test every 1-2 years based on other results. If the ALP continues to climb a biopsy could be considered.
- Consider long term use of Denamarin, and monitoring for the signs of Cushing's developing.
- A primary vacuolar hepatopathy can be breed related and is seen in Scottish Terriers, Schnauzers, Cocker spaniels etc..

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The splenic nodule observed is very small and subtle. Recommend monitoring with ultrasound for any changes, which could indicate a more aggressive lesion.

REFERRING VET

Dr. Kalivoda

The changes in the kidneys are relatively mild. If not already done I recommend blood pressure evaluation, urinalysis, culture and urine protein to creatinine ratio. If proteinuria is persistent then I recommend instituting therapy. A good resource is the ACVIM consensus statement on proteinuria, which you can find at www.ACVIM.org.

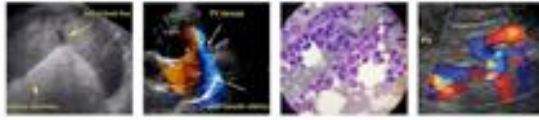
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In dogs with proteinuria we often also recommend infectious disease testing (tick borne disease) and three view thoracic radiographs.



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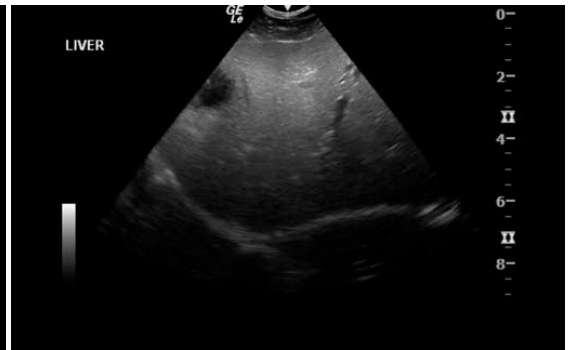
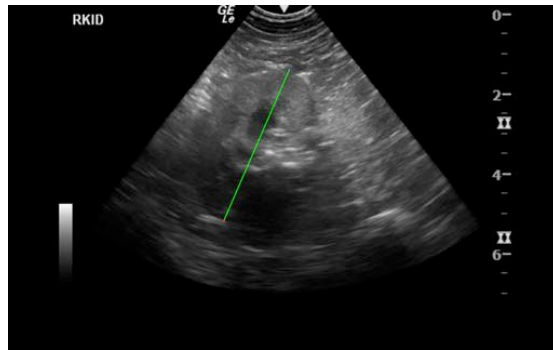
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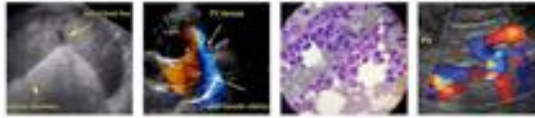
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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